

CLAIMS

What claimed is:

1. A method of transmitting a vehicle location to another location remote from the vehicle location, the method comprising:

sensing the vehicle location with a Global Positioning System (GPS) unit;

performing map matching of the sensed vehicle location with respect to an on-board previously stored map database by performing iterations with a statistical filter provided with the sensed vehicle location from the GPS unit and estimated probable locations relative to the map database coordinates;

equating the map matched position coordinates to a map database LOCUS, the LOCUS point being the position relative to the geocoded location; and

transmitting one of the map matched position coordinates or LOCUS point to the another location remote from the vehicle location.

2. The method of claim 1, wherein the map matched position coordinates or LOCUS point are wirelessly transmitted to the another location remote from the vehicle location.

3. The method of claim 1, further comprising storing the previously stored map database on an on-board storage unit.

4. The method of claim 3, wherein the on-board storage unit comprises a hard drive.

5. The method of claim 3, wherein the on-board storage unit comprises a CD ROM.

6. The method of claim 1, further comprising map matching with a Central Processing Unit (CPU).

7. The method of claim 1, further comprising statistical filtering with a Central Processing Unit (CPU).

8. The method of claim 1, further comprising equating the map matched position coordinates to a map database LOCUS with a Central Processing Unit (CPU).

9. The method of claim 1, further comprising displaying the map matched position of the vehicle relative to the map database with a display unit.

10. An apparatus for transmitting a vehicle location to another location remote from the vehicle location, the apparatus comprising:

a Global Positioning System (GPS) unit arranged to sensed the vehicle position;

an on-board storage unit arranged to store a map database, the map database being previously stored in the on-board storage unit;

a map matcher including a statistical filter, the map matcher being arranged to perform map matching of the sensed vehicle location with respect to the previously stored map database stored on the on-board storage unit by performing iterations with the statistical filter provided with the sensed vehicle location from the GPS unit and estimated probable locations relative to the map database coordinates, the map matcher equating the map matched position coordinates to a map database LOCUS, the LOCUS point being the position relative to the geocoded location; and

a transmitter arranged to transmit one of the map matched position coordinates or LOCUS point to the another location remote from the vehicle location.

11. The apparatus of claim 10, wherein the transmitter comprises a wireless transmitter.

12. The apparatus of claim 10, wherein the on-board storage unit comprises a hard drive.

13. The apparatus of claim 10, wherein the on-board storage unit comprises a CD ROM.

14. The apparatus of claim 10, wherein the map matcher including a statistical filter comprises a Central Processing Unit (CPU).

15. The apparatus of claim 10, further comprising a display unit arranged to display the map matched position of the vehicle relative to the map database.

16. The apparatus of claim 10, wherein the transmitter comprises a cellular telephone.

17. The method of claim 1, further comprising transmitting one of the map matched position coordinates or LOCUS point to the another location remote from the vehicle location with a cellular telephone.